

CLAIMS

What is claimed is:

5

1. A method for management of a distributed data processing system, the method comprising:

determining a unique network hardware identifier for a network device;

10 associating the unique network hardware identifier with geographic location information; and

configuring the network device in accordance with the geographic location information through a network administrative user interface.

15

2. The method of claim 1 wherein the unique network hardware identifier is a MAC (Media Access Control) address.

20

3. The method of claim 1 further comprising:

authorizing user access to the network device based on a user security parameter corresponding to the geographic location information.

25

4. The method of claim 1 further comprising:

generating a unique name for an endpoint resource on the network device, wherein the unique name comprises the geographic location information.

5. The method of claim 4 further comprising:
associating the unique name with security attributes
for the endpoint resource.

5 6. The method of claim 4 further comprising:
associating the unique name for the endpoint
resource with the unique network hardware identifier.

7. The method of claim 4 further comprising:
10 determining a router closest to the endpoint
resource;

retrieving router geographic location information
associated with the router; and
15 using the router geographic location information in
the generated unique name for the endpoint resource.

8. The method of claim 1 further comprising:
determining a network address generator (NAG) for
the endpoint resource;

20 retrieving NAG geographic location information
associated with the NAG; and
using the NAG geographic location information in the
generated unique name for the endpoint resource.

25 9. The method of claim 8 wherein the network address
generator is a server operating in accordance with a DHCP
(Dynamic Host Configuration Protocol) protocol.

10. The method of claim 1 further comprising:

detecting a change of location of the network device within the distributed data processing system based on the geographic location information.

5

11. The method of claim 10 further comprising:

reconfiguring the network device based on the detected change of location of the network device.

10 12. The method of claim 10 further comprising:

reconfiguring user security parameters based on the detected change of location of the network device.

13. The method of claim 1 further comprising:

15 representing the distributed data processing system as a set of scopes, wherein a scope comprises a logical organization of network-related objects;

20 associating each scope with a management customer, wherein each scope is uniquely assigned to a management customer, wherein each scope is uniquely associated with a set of configuration parameters for managing each scope;

25 managing the distributed data processing system as a set of logical networks, wherein a logical network comprises a set of scopes, and wherein each logical network is uniquely assigned to a management customer; and

30 allowing an administrative user to dynamically reconfigure logical networks within the distributed data processing system.

14. The method of claim 1 further comprising:

dynamically discovering endpoints, systems, and
networks within the distributed data processing system;

correspondingly representing endpoints, systems, and

5 networks within the distributed data processing system as
a set of endpoint objects, system objects, and network
objects; and

logically organizing the endpoint objects, system
objects, and network objects within a set of scopes,

10 wherein each endpoint object, each system object, and
each network object is uniquely assigned to a scope such
that scopes do not logically overlap.

15. A method for distributing software, the method comprising:

associating geographic location information with network devices in a distributed data processing system;

5 determining to perform a software distribution operation; and

in response to the determination to perform the software distribution operation, distributing a first software module to network devices in a first set of network devices in accordance with the geographic location information associated with the network devices in the first set of network devices.

16. The method of claim 15 further comprising:

15 in response to the determination to perform the software distribution operation, distributing a second software module to network devices in a second set of network devices in accordance with the geographic location information associated with the network devices in the second set of network devices.

17. The method of claim 15 further comprising:

determining the geographic location information in conjunction with a DHCP (Dynamic Host Configuration Protocol) operation.

18. An apparatus for management of a distributed data processing system, the apparatus comprising:

means for determining a unique network hardware identifier for a network device;

5 means for associating the unique network hardware identifier with geographic location information; and

means for configuring the network device in accordance with the geographic location information through a network administrative user interface.

10 19. The apparatus of claim 18 wherein the unique network hardware identifier is a MAC (Media Access Control) address.

15 20. The apparatus of claim 18 further comprising:

means for authorizing user access to the network device based on a user security parameter corresponding to the geographic location information.

20 21. The apparatus of claim 18 further comprising:

means for generating a unique name for an endpoint resource on the network device, wherein the unique name comprises the geographic location information.

25 22. The apparatus of claim 21 further comprising:

means for associating the unique name with security attributes for the endpoint resource.

23. The apparatus of claim 21 further comprising:
means for associating the unique name for the
endpoint resource with the unique network hardware
identifier.

5

24. The apparatus of claim 21 further comprising:
means for determining a router closest to the
endpoint resource;

10

means for retrieving router geographic location
information associated with the router; and

means for using the router geographic location
information in the generated unique name for the endpoint
resource.

15

25. The apparatus of claim 18 further comprising:
means for determining a network address generator
(NAG) for the endpoint resource;

20

means for retrieving NAG geographic location
information associated with the NAG; and

means for using the NAG geographic location
information in the generated unique name for the endpoint
resource.

25

26. The apparatus of claim 25 wherein the network
address generator is a server operating in accordance
with a DHCP (Dynamic Host Configuration Protocol)
protocol.

27. The apparatus of claim 18 further comprising:
means for detecting a change of location of the
network device within the distributed data processing
system based on the geographic location information.

5

28. The apparatus of claim 27 further comprising:
means for reconfiguring the network device based on
the detected change of location of the network device.

10

29. The apparatus of claim 27 further comprising:
means for reconfiguring user security parameters
based on the detected change of location of the network
device.

15

30. The apparatus of claim 18 further comprising:
means for representing the distributed data
processing system as a set of scopes, wherein a scope
comprises a logical organization of network-related
objects;

20

means for associating each scope with a management
customer, wherein each scope is uniquely assigned to a
management customer, wherein each scope is uniquely
associated with a set of configuration parameters for
managing each scope;

25

means for managing the distributed data processing
system as a set of logical networks, wherein a logical
network comprises a set of scopes, and wherein each
logical network is uniquely assigned to a management
customer; and

means for allowing an administrative user to dynamically reconfigure logical networks within the distributed data processing system.

5 31. The apparatus of claim 18 further comprising:

means for dynamically discovering endpoints, systems, and networks within the distributed data processing system;

10 means for correspondingly representing endpoints, systems, and networks within the distributed data processing system as a set of endpoint objects, system objects, and network objects; and

15 means for logically organizing the endpoint objects, system objects, and network objects within a set of scopes, wherein each endpoint object, each system object, and each network object is uniquely assigned to a scope such that scopes do not logically overlap.

32. An apparatus for distributing software, the apparatus comprising:

means for associating geographic location information with network devices in a distributed data processing system;

means for determining to perform a software distribution operation; and

means for distributing a first software module to network devices in a first set of network devices in accordance with the geographic location information associated with the network devices in the first set of network devices in response to the determination to perform the software distribution operation.

33. The apparatus of claim 32 further comprising:

means for distributing a second software module to network devices in a second set of network devices in accordance with the geographic location information associated with the network devices in the second set of network devices in response to the determination to perform the software distribution operation.

34. The apparatus of claim 32 further comprising:

means for determining the geographic location information in conjunction with a DHCP (Dynamic Host Configuration Protocol) operation.

35. A computer program product in a computer readable medium for use in managing a distributed data processing system, the computer program product comprising:

instructions for determining a unique network

5 hardware identifier for a network device;

instructions for associating the unique network hardware identifier with geographic location information; and

10 instructions for configuring the network device in accordance with the geographic location information through a network administrative user interface.

36. The computer program product of claim 35 wherein the unique network hardware identifier is a MAC (Media Access Control) address.

37. The computer program product of claim 35 further comprising:

20 instructions for authorizing user access to the network device based on a user security parameter corresponding to the geographic location information.

38. A computer program product in a computer readable medium for use in managing a distributed data processing system, the computer program product comprising:

instructions for associating geographic location
5 information with network devices in a distributed data processing system;

instructions for determining to perform a software distribution operation; and

instructions for distributing a first software
10 module to network devices in a first set of network devices in accordance with the geographic location information associated with the network devices in the first set of network devices in response to the determination to perform the software distribution
15 operation.

39. The computer program product of claim 38 further comprising:

instructions for distributing a second software
20 module to network devices in a second set of network devices in accordance with the geographic location information associated with the network devices in the second set of network devices in response to the determination to perform the software distribution
25 operation.

40. The computer program product of claim 38 further comprising:

instructions for determining the geographic location
30 information in conjunction with a DHCP (Dynamic Host Configuration Protocol) operation.